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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,766	07/27/2001	Hyun-Sook Kang	Q63182	7463

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SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, NW
Washington, DC 20037-3213

EXAMINER

DANIEL JR, WILLIE J

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 02/26/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/915,766

Applicant(s)

KANG ET AL.

Examiner

Willie J. Daniel, Jr.

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. **Figures 1 and 2** should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Fig. 1 “**ref. 16**” is not in the specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because **Fig. 4 “ref. S114”** and “**ref. S116**” has incorrect words used in which a line has been drawn through. Examiner recommends deleting the incorrect words. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to because **Fig. 5** the lettering. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 5, 6, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by **Bauchot (US 5,970,062)**.

Regarding **Claim 1**, Bauchot discloses a method for allocating bandwidth in a wireless Local Area Network having an Access Point (18) and at least one mobile terminal (10) which reads on the claimed “wireless communication terminal” (see Fig. 1A), comprising the steps of:

(a) the Access Point (18) allocating a fixed bandwidth to said at least one wireless communication terminal (10) (see col. 6, lines 21-58; Figs. 1A and 3);

(b) receiving a transmission rate corresponding to a desired UP_RESERVED which reads on the claimed "Contention Free Period" of data to be transceived from said at least one wireless communication terminal (10) (see col. 6, lines 34-40; col. 8, lines 14-20; col. 9, lines 30-48; Fig. 3), where the data is transferred at a transmission rate according to the mobile terminal requests corresponding to the allocated bandwidth for transmitting in which the transmission rate would be inherent; and

(c) adjusting a rate of Contention Free Period occupancy of said at least one wireless communication terminal (18) in the fixed bandwidth, based on the received transmission rate (see col. 6, lines 34-40; col. 8, lines 14-20; col. 9, lines 30-48; Fig. 3), where the rate is adjusted relating to the request made from the mobile terminal.

Regarding **Claim 5**, Bauchot discloses the method of claim 1, wherein the step (c) comprises the steps of:

calculating a Contention Free Period occupancy requested by said at least one wireless communication terminal (10) (see col. 6, lines 34-40; col. 8, line 7 - col. 9, line 49; Fig. 3), where the mobile terminal requests addition bandwidth and the Contention Free Period is calculated and adjusted accordingly;

accepting the Contention Free Period occupancy as a current Contention Free Period occupancy, if the Contention Free Period occupancy requested by said at least one wireless communication terminal (10) does not exceed a Contention Free Period occupancy limit (see col. 6, lines 34-40; col. 8, line 7 - col. 9, line 49), where the access point accepts the mobile terminals request for additional bandwidth by adjusting the bandwidth; and

associating said at least one wireless communication terminal (10) to the Access Point (18) after adjusting a ratio of the Contention Free Period to Contention Period, if a sum of the current Contention Free Period occupancy is less than a maximum Contention Free Period (see col. 6, lines 34-40; col. 8, line 7 - col. 9, line 49; Fig. 3), where the mobile terminal and access point communicates according to the adjusted ratio.

Regarding **Claim 6**, Bauchot discloses an apparatus for allocating bandwidth in a wireless Local Area Network, including at least one wireless communication terminal (10) (see Fig. 1A), comprising:

bandwidth fixing means (58) for fixing bandwidth to be allocated to said at least one wireless communication terminal (10) (see col. 6, lines 21-58; Figs. 1A and 3);

transmission rate receiving means (38) for receiving a transmission rate of said at least one wireless communication terminal (10) from said at least one wireless communication terminal, if said at least one wireless communication terminal is intended for a data transmission through a Contention Free Period (see col. 6, lines 34-40; col. 8, lines 14-20; col. 9, lines 30-48; Figs. 1A and 3), where the data is transferred at a transmission rate according to the mobile terminal requests corresponding to the allocated bandwidth for transmitting in which the transmission rate would be inherent; and

period adjusting means (84) for adjusting a rate of a Contention Free Period occupancy of said at least one wireless communication terminal (10) in the bandwidth, based on the received transmission rate in the fixed bandwidth, based on the received transmission rate (see col. 6, lines 34-40; col. 8, lines 14-20; col. 9, lines 30-48; Fig. 3), where the rate is adjusted relating to the request made from the mobile terminal.

Regarding **Claim 10**, Bauchot discloses the apparatus of claim 6, wherein the period adjusting means comprises:

calculating means (84) for calculating the Contention Free Period occupancy requested by said at least one wireless communication terminal (10), based on the received transmission rate (see col. 6, lines 34-40; col. 8, line 7 - col. 9, line 49; Fig. 3), where the mobile terminal requests addition bandwidth and the Contention Free Period is calculated and adjusted accordingly;

accepting means (38) for accepting the requested Contention Free Period occupancy as a current Contention Free Period occupancy, if the Contention Free Period occupancy requested by said at least one wireless communication terminal (10) does not exceed a Contention Free Period occupancy limit (see col. 6, lines 34-40; col. 8, line 7 - col. 9, line 49), where the access point accepts the mobile terminals request for additional bandwidth by adjusting the bandwidth; and

association means (48) for associating the mobile terminal (10) which reads on the claimed "terminal" to an Access Point (18) after adjusting a ratio of the Contention Free Period to Contention Period, if a sum of the current Contention Free Period occupancy is less than a maximum Contention Free Period (see col. 6, lines 34-40; col. 8, line 7 - col. 9, line 49; Fig. 3), where the mobile terminal and access point communicates according to the adjusted ratio.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bauchot (US 5,970,062)** in view of **Kalliokulju et al. (US 6,553,006)**, hereinafter **Kalliokulju**.

Regarding **Claim 2**, Bauchot teaches of data transfer (see col. 6, lines 34-36).

Bauchot fails to disclose the data being real time data. However, the examiner maintains that data being real time data was well known in the art, as taught by Kalliokulju.

In the same field of endeavor, Kalliokulju teaches of data being real time data (see col. 8, lines 62-63), where the data is based on real time data that is transmitted.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bauchot and Kalliokulju to have data being real time data.

The advantage of combining the teachings of Bauchot and Kalliokulju to have resources allocated (e.g. based on bandwidth) that provides quality of service for data transmission (see col. 8, lines 18-64).

Regarding **Claim 4**, Bauchot teaches of having a data packet length for data transmission at an associated transmission rate (see col. 6, lines 34-40; col. 8, line 7 - col. 9, line 49; Fig. 3), where length of the data packet (frame) is according to the bandwidth.

Bauchot fails to disclose the data transmission speed. However, the examiner maintains that data transmission speed was well known in the art, as taught by Kalliokulju.

Kalliokulju further teaches of data transmission with speed (see col. 4, lines 61-64), where the data transmission has an associated speed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bauchot and Kalliokulju to have data transmission speed for transmission.

The advantage of combining the teachings of Bauchot and Kalliokulju to have resources allocated (e.g. based on bandwidth) that provides quality of service for data transmission (see col. 8, lines 18-64).

Regarding **Claim 7**, Bauchot teaches of data transfer (see col. 6, lines 34-36). Bauchot fails to disclose the data being real time data. However, the examiner maintains that data being real time data was well known in the art, as taught by Kalliokulju.

Kalliokulju further teaches of data being real time data (see col. 8, lines 62-63), where the data is based on real time data that is transmitted.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bauchot and Kalliokulju to have data being real time data.

The advantage of combining the teachings of Bauchot and Kalliokulju to have resources allocated (e.g. based on bandwidth) that provides quality of service for data transmission (see col. 8, lines 18-64).

Regarding **Claim 9**, Bauchot teaches of having a data packet length for data transmission at an associated transmission rate (see col. 6, lines 34-40; col. 8, line 7 - col. 9, line 49; Fig. 3), where length of the data packet (frame) is according to the bandwidth. Bauchot fails to disclose the data transmission speed. However, the examiner maintains that data transmission speed was well known in the art, as taught by Kalliokulju.

Kalliokulju further teaches of data transmission with speed (see col. 4, lines 61-64), where the data transmission has an associated speed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bauchot and Kalliokulju to have data transmission speed for transmission.

The advantage of combining the teachings of Bauchot and Kalliokulju to have resources allocated (e.g. based on bandwidth) that provides quality of service for data transmission (see col. 8, lines 18-64).

Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bauchot (US 5,970,062)** in view of **Kalliokulju et al. (US 6,553,006)** and **Montpetit (US 6,366,761)**.

Regarding **Claim 3**, Bauchot teaches the fixed time frame which reads on the claimed "bandwidth" is the sum of Down, Up_Reserved, and Up_Contention periods (see col. 8, lines 28-34; Fig. 3), where the periods are for transmission of data. Bauchot fails to disclose the data being real time and non real time data and the bandwidth being the sum of contention and contention free periods. However, the examiner maintains that data being real time and non real time data was well known in the art, as taught by Kalliokulju.

Kalliokulju further teaches of data being real time and non real time data (see col. 8, lines 62-64), where the data is based on real time and non real time data that is transmitted. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bauchot and Kalliokulju to have data being real time data. The advantage of combining the teachings of Bauchot and Kalliokulju to have resources allocated in which the allocation is based on, for example, bandwidth that provides quality of service for data transmission (see col. 8, lines 18-64). Bauchot and Kalliokulju fails to disclose the bandwidth being the sum of contention and contention free periods. However, the examiner maintains that bandwidth being the sum of contention and contention free periods was well known in the art, as taught by Montpetit.

In the same field of endeavor, Montpetit teaches of bandwidth being the sum of two periods (see col. 9, line 1 - col. 10, line 37; Fig. 6), where the bandwidth has a threshold for transmission until a request is made for the additional bandwidth that is available in the contention channel.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bauchot, Kalliokulju, and Montpetit to have bandwidth being the sum of contention and contention free periods.

The advantage of combining the teachings of Bauchot, Kalliokulju, and Montpetit is to allocate the additional bandwidth for packet transmission when requested to maintain quality of service (see col. 5, lines 46-61; col. 9, lines 30-36).

Regarding **Claim 8**, Bauchot teaches the fixed time frame which reads on the claimed “bandwidth” is the sum of Down, Up_Reserved, and Up_Contention periods (see col. 8, lines

28-34; Fig. 3), where the periods are for transmission of data. Bauchot fails to disclose the data being real time and non real time data and the bandwidth being the sum of contention and contention free periods. However, the examiner maintains that data being real time and non real time data was well known in the art, as taught by Kalliokulju.

Kalliokulju further teaches of data being real time and non real time data (see col. 8, lines 62-64), where the data is based on real time and non real time data that is transmitted. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bauchot and Kalliokulju to have data being real time data. The advantage of combining the teachings of Bauchot and Kalliokulju to have resources allocated in which the allocation is based on, for example, bandwidth that provides quality of service for data transmission (see col. 8, lines 18-64). Bauchot and Kalliokulju fails to disclose the bandwidth being the sum of contention and contention free periods. However, the examiner maintains that bandwidth being the sum of contention and contention free periods was well known in the art, as taught by Montpetit.

Montpetit further teaches of bandwidth being the sum of two periods (see col. 9, line 1 - col. 10, line 37; Fig. 6), where the bandwidth has a threshold for transmission until a request is made for the additional bandwidth that is available in the contention channel.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bauchot, Kalliokulju, and Montpetit to have bandwidth being the sum of contention and contention free periods.

The advantage of combining the teachings of Bauchot, Kalliokulju, and Montpetit is to allocate the additional bandwidth for packet transmission when requested to maintain quality of service (see col. 5, lines 46-61; col. 9, lines 30-36).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. **Bauchot et al. (US 6,141,336)** discloses *Traffic Scheduling Method, System and Article of Manufacture for a Wireless Access To An Asynchronous Transfer Mode Network*.
- b. **Mangold et al. (US 2002/0093929)** discloses *System and Method for Sharing Bandwidth Between Co-Located 802.11A/E and HIPERLAN/2 Systems*.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (703) 305-8636. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2686

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJD,JR/wjd,jr
20 February 2004

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